



Marine Nutrient Criteria: The Next Frontier

LD 1297

- **Conceptual plan to establish coastal nutrient criteria, work plan, timelines**
- **Technological approaches to nutrient reduction in wastewater**
- **Inventory of point and nonpoint sources**

Conceptual approaches



- **Reference condition approach**
- **Data distribution approach**
- **Predictive model approach**
- **Effects-based approach**



Reference condition

Reference condition determined from unperturbed sites

- High confidence quality is protected
- Simple
- What is “reference quality”?
- Lacking available data

Data distribution approach

Assumes some percentage of data represents good quality water.

- **Subjective**
- **Simple, data available**
- **Some percentage of streams won't attain**

Predictive models

Correlation of nutrient concentrations to other environmental variables

- Commonly used for other criteria
- Select multiple criteria
- Nutrient models are complex – multivariate
- Lack of data for Maine waters

The background of the slide is a photograph of a serene lake scene. In the distance, a white house with a prominent cupola sits atop a lush, green hill. The water in the foreground is a deep blue with gentle ripples. A small orange buoy is visible in the water. The overall atmosphere is peaceful and natural.

Effects-based

Uses nutrient criteria as ‘screening’ values, dependent on other criteria to determine attainment

- Confidence that uses are attained
- Can set multiple criteria
- Few response criteria available for marine waters
- Two types of data required - cost